

"VERSION WITH MARKINGS TO SHOW CHANGES MADE".

1 Claim 26. An electronic package comprising:

2 a first flexible circuitized substrate having at least one conductive aperture therein

3 having an external surface;

4 a second flexible circuitized substrate having at least one conductive aperture

5 therein having an external surface, said first and second flexible circuitized substrates

6 aligned such that said at least one conductive aperture of said first flexible circuitized

7 substrate is substantially aligned with said at least one conductive aperture of said second

8 flexible circuitized substrate wherein said first and second flexible circuitized substrates are

9 comprised of a material selected from the group consisting of polyimide, polytetrafluoro-

10 ethylene, and epoxy glass cloth, said at least one conductive aperture of said first flexible

11 circuitized substrate and said at least one conductive aperture of said second flexible

12 circuitized substrate including a conductive metallic layer thereon selected from the group

13 consisting of copper, nickel, gold, chromium, solder and alloys thereof; and

14 at least one solder member including a first contact portion extending from said

15 external surface of said conductive aperture of said first flexible circuitized substrate and a

16 second contact portion extending substantially within both of said aligned conductive

17 apertures of said first and second flexible circuitized substrates to said external surface of

18 said conductive aperture of said second flexible circuitized substrate so as to substantially

19 form a solder dome thereon and secure said flexible circuitized substrates together [said

20 metallic material of said at least one conductive aperture of said first flexible circuitized

21 substrate and said at least one conductive aperture of said second flexible circuitized

22 substrate including a protective layer thereon, said protective layer selected from the
23 group consisting of benzatriazole, chlorite, and immersion tin].

1 Claim 34. The electronic package of Claim 26 [32] wherein said second contact
2 portion of said solder member including said solder dome is at least one of an array of
3 solder members on said external surface of said conductive aperture of said second flexible
4 circuitized substrate.

1 Claim 44. A single chip carrier comprising:

2 a first circuitized substrate having at least one conductive aperture therein having
3 an external surface;

4 a second circuitized substrate having at least one conductive aperture therein
5 having an external surface, said first and second circuitized substrates aligned such that
6 said at least one conductive aperture of said first circuitized substrate is substantially
7 aligned with said at least one conductive aperture of said second circuitized substrate, said
8 at least one conductive aperture of said first circuitized substrate and said at least one
9 conductive aperture of said second circuitized substrate including a conductive metallic
10 layer thereon selected from the group consisting of copper, nickel, gold, chromium, solder
11 and alloys thereof;

12 at least one solder member including a first contact portion for connection to a
13 printed circuit board extending from said external surface of said conductive aperture of
14 said first circuitized substrate and a second contact portion extending substantially within
15 both of said aligned conductive apertures of said first and second circuitized substrates to
16 said external surface of said conductive aperture of said second circuitized substrate so as
17 to substantially form a solder dome thereon to secure said circuitized substrates together

18 wherein said second contact portion of said solder member is at least one of an array of
19 solder members on said external surface of said conductive aperture of said second
20 circuitized substrate [said metallic material of said at least one conductive aperture of said
21 first circuitized substrate and said at least one conductive aperture of said second
22 circuitized substrate including a protective layer thereon, said protective layer selected
23 from the group consisting of benzatriazole, chlorite, and immersion tin]; and
24 at least one chip attached to said array of solder members.